

except that the protective layer consisted of the upper layer alone.

COMPARATIVE EXAMPLE 3

No protective layer was formed on the periphery of the central circular hole of the flexible magnetic disc.

EXAMPLE 3

A protective layer 11 was formed on both sides of the periphery of the central circular hole 10a of the flexible magnetic disc sheet 10 in the same manner as in Example 1, except that the coating solution for the lower layer composition was replaced by the following composition.

Coating solution for composition of lower layer of protective layer	
Type R printing ink (available from Tanpo Print K.K.)	
Vehicle:	vinyl chloride, polyethylene and polyester resin
Pigment:	titanium oxide
Vehicle/pigment proportion:	100/40 (by weight)

These flexible magnetic disc specimens thus obtained were measured for coefficient of friction and subjected to test for mountability in a disc drive at a temperature of 25° C. and a relative humidity of 80%. The results are set forth in Table 1.

For the measurement of coefficient of friction, the positioning member (collet) was rubbed with the magnetic sheet at a feed rate of 0.8 mm/sec under the load of 70 g. The measurement of coefficient of friction with the rotary portion of the positioning member was similarly conducted.

The drives used for the test for mountability in the disc drive were YD-280 and 380 available from Y-E Data K.K., JA751 and 561 available from Matsushita Communication Industry Co., Ltd., and M-2894 and 4853 available from Mitsubishi Electric Corp.

For this test, the disc specimens were repeatedly mounted in these drives ten times. In the table, E indicates a disc specimen which showed no defects on all these drives, and P indicates a disc specimen which showed defects on one or more drives.

The percentage adhesion to the disc drive at a temperature of 40° C. and a relative humidity of 80% is set forth in Table 1. The drive used in this measurement was YD-480 available from Y-E Data K.K. For this measurement, the adhesion to the rotary portion was observed after 12 hours of continuous clamping under these conditions. The percentage adhesion was calculated by dividing the number of disc specimens which adhered to the rotary portion by the number of disc specimens tested and multiplying it by 100. The results are set forth in Table 1.

Ten sheets of each flexible magnetic disc specimen were piled up under the load of 1 kg. Thereafter, the number of flexible magnetic discs which had been adhered to each other was then determined. The results are set forth in Table 1.

TABLE 1

Example of protective layer	Measurement condition				
	25° C., 80% RH		40° C., 80% RH		
	Item measured				Number of discs adhered to each other
	Coefficient of friction		Mount-ability test	Adhesion to disc drive	
with collet	with rotary portion				
Example 1	0.33	0.23	E	0	0
Example 2	0.34	0.24	E	0	0
Comparative Example 1	0.34	0.25	E	80	3
Comparative Example 2	0.34	0.26	E	70	7
Comparative Example 3	0.50	0.43	P	0	0
Example 3	0.32	0.25	E	0	0

As shown in Table 1, Comparative Specimens 1 and 2 exhibit substantially the same level of friction coefficient as the present specimens and an excellent mountability in the disc drive but showed adhesion to the disc drive. In the piling-up test, some sheets were observed adhered to each other in Comparative Examples 1 and 2.

These flexible magnetic disc specimens were repeatedly mounted and detached from YD-380 available from Y-E Data K.K. at a temperature of 25° C. and a relative humidity of 50% 50,000 times. Thereafter, the flexible magnetic disc specimens were observed for falling-off and scratch on the protective layer. A double-coated adhesive tape was put on the protective layer and then peeled off at an angle of 180° to determine adhesion of the protective layer. The results are set forth in Table 2.

TABLE 2

Example No.	Repeated Mounting and detachment over 50,000 times		
	Falling-off of protective layer	Scratch	Adhesion
Example 1	None	No scratch	No peeling under 1,000 g
Example 2	None	No scratch	No peeling under 1,000 g
Comparative Example 1	Partially falls off	Small scratch	Peeling observed under 800 g
Comparative Example 2	Partially falls off	Medium scratch	Peeling observed under 900 g
Comparative Example 3	Magnetic layer falls off	Large scratch	—
Example 3	None	No scratch	No peeling under 1,000 g

While the invention has been described in detail and with reference to specific embodiments thereof, it will be apparent to one skilled in the art that various changes and modifications can be made therein without departing from the spirit and scope thereof.

What is claimed is:

1. A flexible magnetic disc comprising a protective layer on the periphery of a central hole, wherein said protective layer comprises two layers, the lower one of said two layers being a composition comprising a particulate pigment having a particle diameter in the range of from 0.01 to 5 μ m and a vehicle selected from the group consisting of vinyl chloride resin, polyester resin and polyethylene resin, said vehicle being contained in an